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EXAMINER

NEGRON, I

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 09/03/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/878,199

Applicant(s)

Kenji

Examiner

Ismael Negron

Group Art Unit

2875



☒ Responsive to communication(s) filed on Aug 4, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 3 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 3 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Method of Manufacturing a Ring-Shaped Lighting Unit for Inspecting Surfaces.**

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Borgert et al. in view of Huang.

Borgert et al. discloses an illumination system having:

- **a lighting dome**, Figure 1, reference number 12;
- **a plurality of printed circuit boards**, Figure 5, reference numbers 34, 36, 38, 40, 42, 44, 46 and 48;
- **the printed circuit boards having a concentric circular hole**, Figure 5, reference number 32;

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- **a cutout region with at least two sides in a planar state**, Figure 5, reference numbers 66, 68, 70, 72, 74, 76, 78 and 80;
- **the printed circuit board cutout region sides being brought together to form a hollow truncated cone**, columns 3 and 4, lines 65-67 and 1-2, respectively ;
- **a plurality of illuminants embedded in a concave face of the printed circuit boards**, Figure 5, reference number 114;
- **the illuminants giving off a cone of light**, column 2, lines 1-12; and
- **the printed circuit board being held in position by a frame**, upper and lower tier portion referred to in column 3, lines 62-65.

Bergert et al. teaches all the limitations of the claim, except:

- **forming a flexible sheet material having at least two sides in a planar state**;
- **bending the flexible sheet material and joining the two sides, forming a truncated cone**.

Huang discloses a lamp shade structure constructed by:

- **forming a flexible sheet material having at least two sides in a planar state**, column 2, lines 56-57;
- **bending the flexible sheet material and joining the two sides, forming a truncated cone**, column 2, lines 55-60.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the hollow truncated cone of Huang in the illumination system of Borgert et al. to obtain a cheap, easy to fabricate hollow truncated cone structure, as per the teachings of Huang (column 1, lines 20-37).

Response to Arguments

3. Applicant's arguments filed 8/6/99 have been fully considered but they are not persuasive.

Applicant argues that Borgert et al. (5,519,496) does not disclose a method for manufacturing a light dome. Applicant further states that Borgert et al. also fails to teach the steps of:

- **holding a flexible circular printed circuit board having a cutout with at least two sides in a planar state;**
- **joining the two sides of the cutout together or holding them in close contact to form a hollow truncated cone; and**
- **retaining the circuit board in the shape of a hollow truncated cone within a frame.**

Applicant also argues that Huang (5,420,773), relied by the examiner in combination with Borgert to reject claims 1 and 2, is not related to a lighting unit for illuminating the surface of a

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product in order to inspect for surface flaws or defects. Moreover, the applicant argues that Huang does not teach a frame to keep the printed circuit board in the shape of a hollow truncated cone.

4. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

5. Applicant's argument that *Borgert et al. in combination with Huang does not teaches all the limitation of the claims* is not persuasive, since the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

6. In response to applicant's argument that Huang is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Huang was concerned the fabrication of a hollow

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truncated cone structure to be used as a lamp shade or lamp base. Among the advantages of the hollow truncated cone structure of Huang is that it could be easily assembled and disassembled(column 1, lines 20-37). The applicant was also concerned with facilitating the assembly and disassembly of a hollow truncated cone structure, as stated in page 3, lines 5-22 of the specification as file. Since both the reference and the applicant address the same problem of making easily assemble hollow truncated cone structures (Huang for lamp shades and bases, and the applicant for a lighting unit for inspecting a surface), Huang is considered a reference pertinent to the particular problem with which the applicant was concerned.

Relevant Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Packard (3,073,210) discloses a prismatic reflecting device used to produce arcuate or circular rays of light. The device of Packard has an annular body of an optical material having a cylindrical outer surface, a flat annular upper surface normal to the cylindrical surface, and a conical inner surface that converges from a lower edge of the cylindrical surface to an inner edge of the annular upper surface.

Arnold (4,893,223) discloses illumination devices for inspection system having a plurality of spaced apart light emitting diodes in mounting locations disposed in a part spherical concave surface; to direct light to the target to be inspected.

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Deck (5,309,277) discloses a high intensity uniform illuminator having a plurality of semiconductor illumination sources arranged or mounted in a spherically contoured surface, so that the illumination axes of the sources converge and meet at a common point.

Moates (5,321,593) discloses a strip lighting system having light emitting diodes mounted on a flexible plastic strip to produce a static or chasing light effect.

Conclusion

THIS ACTION IS MADE FINAL.

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

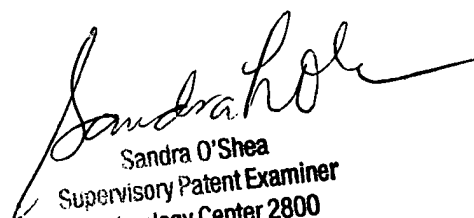
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negron whose telephone number is (703) 308-6086. The examiner can normally be reached on Monday-Friday from 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (703) 305-4939. The facsimile machine number for the Art Group is (703)308-7382.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800

inr

August 26, 1999